Work Order ID 114276 *114276* Page 1 March-04-14 3:00:03 PM **Item ID:** D3391-023 Accept *N900040100* Setup Start **Revision ID:** Mid Tube Assembly Item Name: Start Date: 07/03/2014 Start Otv: 1.00 **Cust Item ID: Required Date:** 07/03/2014 **Req'd Qty:** 1.00 **Customer:** Reference: Run Start Date: 14-03-05 Tooling: Process Plan: **Approvals:** Date: Stop OC: Date: SPC (Y/N): Date: Sequence ID/ Operation Tool ID Tool # Plan Set Up/ Accept · Reject Reject Insp. Work Center ID **Description Run Hours** Code **Qty** Number Stamp **Qty Draw Nbr Revision Nbr** D3391 I 100 0.00 Skidtubes *100* Skidtubes 0.00 Memo Skidtubes 1-Cut tube to finish length as per Dwg D3391 2-Drill pilot holes using DT8796 (Do not drill "B" holes) and drill only 1 fwd saddle hole on one side only as per Dwg D3391 3-Open saddles and GHW holes to Ø0.375" exept for fwd saddle hole of detail 4-Remove .030" from Fwd indexing Ridge as per Dwg D3391 5-Remove indexing ridge on Fwd & Aft end of skidtube as per Dwg D3391 6-Deburr 7-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.250" holes with paint marker, ***DO NOT DRILL HOLES #3-19-20 FROM FWD END OF JIG 8-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0,250"

9-Open wearplate holes of D3391-023 assembly detail section H-H to \emptyset 0.297" (20 holes) as per Dwg D3391

DO NOT OPEN 2 MOST FWD WEARPLATE HOLES

(10 holes) as per Dwg D3391

11

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March-04-14 3	:00:03 PM				-/ / ()						
Item ID: Revision ID:	D3391-023			Accept	*N900	0040	100)* s	etup Sta	rt * [IS1*
Item Name:	Mid Tube Ass	embly							Sto	op */	152*
Start Date: Required Date:	07/03/2014	Start Qty: 1.0 Req'd Qty: 1.0		* *	Cust Item Customer:						
Reference:		2104 2 60,1 210	~ [•	Customera	•					
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:	QC:		Date:	SPC (Y/N):	I	Oate:			Sto	_{ob} */	IR2*
Sequence ID/ Work Center I	(F. C)	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
,	الله الله الله الله الله الله الله الله	10-Ope	n .375" holes to .438" **	*do not open fwd saddle holes*	**						
	المان المان المان المان	11-Loca	ate D3391-021 in D3391	-023 at 9.00" (see view z-z)							
	•	remaini dia hole tranfer	ing fwd saddle holes usin e, using t-pins and clicos	e hole only to .188" dia, transfe g DT 8149 locating from previous to ensure perfect allingment, or 91-023/-021 to 0.438" dia. in D	ısly drill .188" ben up previusly			,	,	' /	
			ing DT8217, locating from	m two previusly drilled holes, d	rill remaining			> 0	e 14/0	4/44	
	٠.,		cating from two fwd wear te holes in D3391-021 us	rplate holes in D3391-023 drill ing DT8937	remaining 6	**		/ .		**	
•		15- Ope	en 10 wearplate holes in	D3391-021 to 0.297" dia.			· ./				
e d _e		16- inse	ert D3391-021 into D339	01-23							·
		17- inse	ert T-pins into first and th	hird fwd saddle holes			/ ;				
		18- ON as per	FIRST SIDE ONLY dri	ll out 2nd and forth fwd saddles	holes to 0.500"						
••		19- ON	V 2ND SIDE ONLY ream	out 2nd and forth saddle hole t	o 0.499".	<i>[</i> ·					
		20-Deb at aft e	· .	s from inside tube, scribe batch	# in D3391-023	/	4 1.2 3				

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Work Order ID 114276 *114276* Page 3 March-04-14 3:00:03 PM Item ID: D3391-023 Accept Setup Start *N900040100* **Revision ID:** Item Name: Mid Tube Assembly Start Date: **Start Oty:** 1.00 07/03/2014 **Cust Item ID: Required Date:** 07/03/2014 Rea'd Otv: 1.00 Customer: Reference: Start Run Process Plan: Date: Approvals: Tooling: Date: Stop Date: _____ OC: SPC (Y/N): Date: Sequence ID/ Operation Tool ID Set Up/ Tool # Plan Reject Reject Accept Insp. **Work Center ID** Description Code Otv Otv Number Stamp **Run Hours** 110 OC5- Inspect part completeness to step on W/O 0.00 *110* 10-40-N @ QC 0.00 Memo Quality Control 120 Chemical Conversion Coat per OSI005 4.1 0.00 1) 14-4-7 Noc *120* HandFinish 0.00 Memo Hand Finishing

130

120

OC

Memo

QC7-Inspect Chemical Conversion Coat

0.00

0.00

Quality Control

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					WORK ORDER NON-	-CO	ONFO	RMANCE / UPDA	TE			AEROSPACE
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Item ID: Revision ID:	D3391-023	oomhlu		Accept	*N900	040	100)*	etup Star	171	S1* S2*
Item Name: Start Date: Required Date: Reference:	Mid Tube Ass 07/03/2014 07/03/2014	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item l Customer:	D:				"IXI	57 "
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140 Skidtubes Skidtubes			bag holes as per dwg t bag holes as per dwg	0.00							

150

QC5- Inspect part completeness to step on W/O

4-Bond web in place as per Dwg D3391 & QSI 015.

Adhere for 12 hours)
A/R Sikaflex exp: 14-10-9
batch#: 12-36-6
NOTE: ENSURE WEB IS INSERTED IN AFT END OF TUBE

0.00

150

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0.00

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Quality Control

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Work Orde		4276		*114	.276*						Page 5
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Sequence ID/ Work Center ID 160 *160* Skidtubes Skidtubes	•	Operation Description Skidtubes Memo 1-Weld cros	sbolt spacer as per dwg D	Set Up/ Run Hours 0.00 0.00 0.00 3391 & QSI 004 A/R/	Tool ID m <i>128385</i>	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170 *170* QC Quality Control		2-grind weld QC10- Inspect visual per		0.00 SHP 0.00 MMG	· ·		·				-

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1 2 N

Quality Control

QC5- Inspect part completeness to step on W/O

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March-04-14 3:00:03 PM Item ID: D3391-023 Accept *N900040100* Setup Start **Revision ID:** Item Name: Mid Tube Assembly **Start Date:** 07/03/2014 **Start Oty:** 1.00 **Cust Item ID: Required Date: 07/03/2014** Req'd Oty: 1.00 **Customer:** Reference: Run Start Date: Tooling: Approvals: Process Plan: Date: Stop Date: OC: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Insp. Accept Reject Work Center ID Description Oty Number Stamp **Run Hours** Code Otv 185 Pressure Wash per OSI005 4.3 0.00 *125* HandFinish 0.00 Memo Hand Finishing AND REALODINE AS PER PAR09-043 190 White Gloss(Ref:4.3,5.1) per QSIQQ5 4.3-Alum 0.00 1 8 14-7-16 35% *100* Powdercoat 0.00 Powder Coating FINISH TIME: 200 . QC3- Inspect Part Finish 0.00 *200* 0.00 Memo Quality Control

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Work Order ID 114276 *114276* Page 7 March-04-14 3:00:03 PM Item ID: D3391-023 Accept *N900040100* Setup Start **Revision ID:** Stop Mid Tube Assembly **Item Name:** Start Oty: 1.00 **Start Date:** 07/03/2014 **Cust Item ID: Required Date:** 07/03/2014 **Req'd Qty:** 1.00 **Customer:** Reference: Start Run Process Plan: Date: Tooling: Approvals: Date: Stop QC: Date: _____ SPC (Y/N): Date: Sequence ID/ Operation Tool ID Tool # Plan Reject Set Up/ Accept Reject Insp. **Work Center ID Description Run Hours** Code Qty Number Qty Stamp 230 0.00 HandFinishing *230* HandFinish 0.00 Memo 0.00
1- press fit D3591-1 spacers using DT9416 starting from 0.500" side Hand Finishing ✓ 2-Install Inserts as per Dwg DAS 27 240 QC5- Inspect part completeness to step on W/O 0.00 *240* OC. 0.00 Memo Quality Control

250

Identify as per dwg & Stock Location: (1)

0.00 Dc1R-747-043/13/14901

In of Il idostic

950
Packaging

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0.00

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DQA:		Date:	:									TRACT
					WORK ORDER NON-	-CC	ONFO	RMANCE / UPDAT			,	AEROSPACE
QA Closed:		Date:	•						W	ork Order up	odate only	
Work Orde	er:				DISPOSITION			AG	SAINST DI	EPARTMENT	/PROCESS	
					Rework			Skid-tube Cros	sstube	1	Water Jet	Engineering
Part N	lo.				Scrap			 	all Fab	Pro	d. Eng. Coor.	Quality
					Use-as-is		Therr	noforming Fir	nishing	Rec/Sto	re/Packaging	Other
NCR N	lo				Suspected Unapproved			Large Fab Com	posite]	Supplier	
Root				Desci	ription of work order update		Initial	Action		Sign &		
Cause	Date	Step	Qty		or non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
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Equip/Tooling												
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Material	_											
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Offset/Setup												,
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	Bendin	-		<u> </u>	Bend		4	Program	<u> </u>	Outside Dim	—	Pressure/Forced
]		Not Conce	ntric	<u> </u>	BOM/Route	<u> </u>	Grain		\vdash	Over/Under	 	Set-up
	Cracks				Broken/Damage/Defect	<u> </u>	Hardwa		. –	Part Incorred	<u> </u>	Temperature/Cure
		Kink/Ripple	e/Wave	<u> </u>	Burrs		1	ion Incomplete/Unqualific		Part Lost/Mi	ssing _	Weld
	Cuffs			<u> </u>	Contamination	<u> </u>	4	tions Incomplete/Unclear	·	Part Moved		Wrong Stock Pulled
ļ	Crushir	_		<u> </u>	Countersink	<u> </u>	1	gned/off center	<u> </u>	Positioned V	· -	
	Heat T			<u> </u>	Cut Too Short	\vdash	Mislabe			Power Loss/	Surge	Other
	—	tion Strip in	Tube	<u> </u>	Drawing	<u> </u>	Misrea					
		Chatter		\vdash	Drill Holes	<u> </u>	Off-set					
		g Sequence			Finish	L	4	Calibration				
	Wave/	Twist in Tu	be		Fit/Function	1	Out of	Sequence				

Work Order ID 114276 *114276* Page 8 March-04-14 3:00:03 PM Item ID: D3391-023 Accept *N900040100* Setup Start **Revision ID:** Stop Item Name: Mid Tube Assembly *1* **Start Date:** Start Oty: 1.00 07/03/2014 **Cust Item ID: Required Date:** 07/03/2014 Rea'd Otv: 1.00 *1* **Customer:** Reference: Run Start Date: Tooling: **Approvals: Process Plan:** Date: Stop OC: Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Accept Reject Insp. Work Center ID Description Run Hours Code Otv Oty Number Stamp 260 QC21- Final Inspection - Work Order Release 0.00

0.00

Memo

Quality Control

260

MLJ 14-07-17 My-7-17

DQA:			Date:						_					•	TRAGE
QA Closed:			Date:			WORK ORDER NON	-C(ONFO	RMANCE / U	PDATE	W	ork Order u	ndate only - F	\neg	AEROSPACE
						DISPOSITION		<u> </u>		4.6.4.4.6.7			· · · · · · · · · · · · · · · · · · ·		
Work Orde	er:					DISPOSITION				AGAINST	DE	PARTMENT,	/PROCESS		
	-					Rework			Skid-tube	Crosstube			Water Jet	\Box	Engineering
Part N	lo.					Scrap			Machining	Small Fab		Pro	d. Eng. Coor.		Quality
						Use-as-is		Therr	moforming	Finishing	L	Rec/Sto	re/Packaging		Other
NCR N	10.					Suspected Unapproved			Large Fab	Composite]	Supplier		
Root					Desci	ription of work order update		L Initial	Ac	tion		Sign &	:	Т	
Cause		Date	Step	Qty		or non-conformance	i i	nief Eng		ription		Date	Verification		QC Inspector
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Landir	ng G	iear			٠	General				•	_	•	-		
	\neg	Bending				Bend	<u> </u>	4	Program			Outside Dim	-	—1	Pressure/Forced
	-	Centre No	ot Concer	itric	<u> </u>	BOM/Route	L	Grain			L	Over/Under	<u> -</u>		Set-up
		Cracks				Broken/Damage/Defect		Hardwa			<u></u>	Part Incorred	⊢	_	Temperature/Cure
	$\overline{}$	Crimp/Kir	nk/Ripple	/Wave		Burrs		1 '	ion Incomplete/U		$oxed{oxed}$	Part Lost/Mi	ssing		Weld
		Cuffs				Contamination	_	4	tions Incomplete/	Unclear	<u></u>	Part Moved	L	\	Wrong Stock Pulled
	-	Crushing				Countersink		1	ned/off center		-	Positioned V		_	
	_	Heat Trea				Cut Too Short	\sqsubseteq	Mislabe				Power Loss/	Surge		Other
	_	Inspection	-	Tube		Drawing	L	Misrea							
	-	Marks/Ch				Drill Holes	<u>_</u>	Off-set							
·	-	Turning S	-			Finish		Out of	Calibration				******		
l l	- 1	Maya/Tw	ict in Tub		- 1	Fit/Function	l .	LOut of	Soguence						

Page 1

Work Order ID: 114276

114276

EC

Parent Item:

D3391-023

D3391-023

Parent Item Name: Mid Tube Assembly

Start Date: 07/03/2014

Required Date: 07/03/2014

Start Oty: 1.00

Required Qty: 1.00

Comments:

KJ/EC IPP A05.10.20New Issue IPP B06.02.10ECN773 dwg rev.D EC

IPP C 07.03.20 rev F dwg

IPP D 07.03.28 re-format EC IPP E 07.10.31 ecn 1053P EC

IPP Rev:F ECN 1056 07-11-13 DD verified by: EC

IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC

IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC

IPP Rev: I 08-11-13 Removed steps per w/o, QC KJ verified by: ec IPP Rev:J add in seq 140 expire date &b# sikaflex DD 10.02.17 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2500-1-100		Manufactured	No			100	Each	85.0000	1	1	//		
D2500-1- Skidtube Extrusion	100								**	ocu	104/04		
				Location		Loc	<u>Otv</u>	Loc Code		,	•		
				HALL	00000		85				-		
				_	82373) 8 6065		24 61		_		-		
D3389-1		Manufactured	No			140	Each	9.0000	1	1			
D3389-1	•								**	7		14	<u> </u>
				Location		Loc	<u>Otv</u>	Loc Code		-)	·	,
				LG /			9		_		-		
D3681-1		Manufactured	No		113057	160	9 Each	176.0000	. (<i>t</i>	()	-		
D3681-1	•	Manufactured	110			100	Lacii	170.0000	**		Č	B614	1-04-6 1 45
Spacer									_		R114	1884	1 ~ F
				Location		Loc	<u>Otv</u>	Loc Code				001	
:				LG001			176				_		
					108647 109109		40 136		_		-		

DQA:			Date:											D. J.	
						WORK ORDER NON-CONFORMANCE / UPDATE									
QA Closed:			Date:			Work Order update only									
Work Order:				DISPOSITION				AGAINST	DE	PARTMENT					
Part N	lo					Rework Scrap		Skid-tube Crosstube Small Fab				1	Water Jet	Engineering Quality	
NCR No.				Use-as-is Suspected Unapproved]	Thermoforming Finishing Large Fab Composite			-	Rec/Sto	Other				
Root					Desci	ription of work order update		nitial	Ac	tion		Sign &		·	
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Equip/Tooling															
Handling/Pre															
Material	┨,								·			i			
Operator		: '											1		
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							FAI	ULT CA	TEGORY			•		•	
Landir	ng Go	ear				General		, , , , , , , , , , , , , , , , , , , ,							
		Bending				Bend		Folio/F	rogram			Outside Dim	ensions	Pressure/Forced	
Ī	\Box	Centre No	t Concer	ntric		BOM/Route		Grain				Over/Under	tolerance	Set-up	
	Cracks			Broken/Damage/Defect		Hardwa	ire .			Part Incorre	cí [Temperature/Cure			
Crimp/Kink/Rip		k/Ripple	/Wave		Burrs		Inspect	ion Incomplete/U	nqualified		Part Lost/Mi	issing	Weld		
	Cuffs			Contamination		Instruct	ions Incomplete/	Unclear		Part Moved	Wrong Stock Pulled				
		Crushing				Countersink		Misalig	ned/off center			Positioned V	Vrong _	<u> </u>	
		Heat Trea	t			Cut Too Short		Mislabe	eled	;		Power Loss/Surge Other			
Ì		nspection	Strip in	Tube		Drawing		Misread	d	•			·		
	-	Marks/Ch				Drill Holes		Off-set							
		Turning Se				Finish	Out of Calibration								
Ì	Wave/Twist in Tube					Fit/Function		10ut of	Somionco						

March-04-14 3:00:01 PM

Work Order ID: 114276

114276

Parent Item:

D3391-023

D3391-023

Parent Item Name: Mid Tube Assembly

Start Date: 07/03/2014

Required Date: 07/03/2014

Start Qty: 1.00

**

**

Required Qty: 1.00

D3591-1

Manufactured

Each

90.0000

2

D3591-1

Bushing

Location	Loc Oty	Loc Code	
FG	10	B121446	<u> </u>
92873	10		
FP001	80		<u> </u>
100699	5		
107918	38		
109107	37		
23	60 Eac	th 1,176.000 2	20 20

ALS4-1032-130

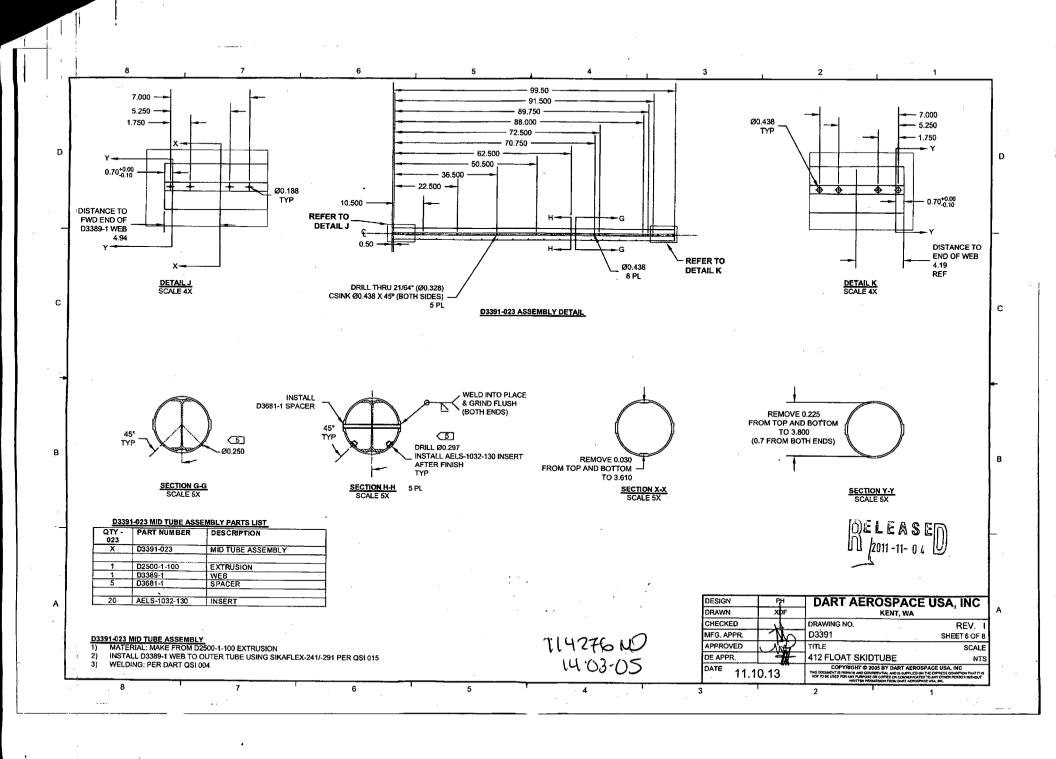
AELS4-1032-130 Purchased

No

AI S4-1032-130

Location	<u>l</u> .	Loc Oty	Loc Code	
ST279		1119	M128649	<u> </u>
	M128179	158	1 . 52 , ,	
	M128211	961		•
st510		57		
	M126109	. 57		

DQA:	Date:	:													
					WORK ORDER NON-CONFORMANCE / UPDATE										
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Part N					Rework Scrap			Skid-tube Crosstube Small Fab			Pro	Water Jet od. Eng. Coor.	Engineering Quality		
NCR N					Use-as-is Suspected Unapproved		Thermoforming Finishing Large Fab Composite					re/Packaging Supplier	Other		
Root				Desci	ription of work order update		Initial Action				Sign &				
Cause	Date	Step	Qty		or non-conformance	Ch	hief Eng Description				Date	Verification	QC Inspector		
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	Centre Not Concentric Cracks				BOM/Route		Grain				Over/Under	tolerance	Set-up		
					Broken/Damage/Defect		Hardwa	re			Part Incorred	ct	Temperature/Cure		
	Crimp/Kink/Ripple/Wave				Burrs		Inspection Incomplete/Unqualified			Part Lost/Mi	ssing	Weld			
	Cuffs				Contamination		Instruct	ions Incomplete	/Unclear		Part Moved		Wrong Stock Pulled		
Ī	Crushing				Countersink		Misalig	ned/off center	•		Positioned V	Vrong			
	Heat T	reat			Cut Too Short		Mislabe	led			Power Loss/	Surge	Other		
	Inspec	tion Strip ir	Tube		Drawing		Misread	İ							
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ļ	Turnin	g Sequence	:		Finish		Out of 0	Calibration							
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DQA:		Date:													
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	-	Centre No	ot Concer	ntric		BOM/Route		Grain			\neg	Over/Under tolerance		$\boldsymbol{\vdash}$	Set-up
-		Cracks			ļ	Broken/Damage/Defect	<u> </u>	Hardwa			-	Part Incorrec		—	Temperature/Cure
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-		Cuffs				Contamination		1	ions Incomplete/I	Unclear	_	Part Moved	,	∟'	Wrong Stock Pulled
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\sim	\vdash	Inspection	•	Tube	<u> </u>	Drawing	Ľ	Misread	ı		_				
	\vdash	Marks/Ch			<u> </u>	Drill Holes	<u> </u>	Off-set		-	_	÷.			<u> </u>
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